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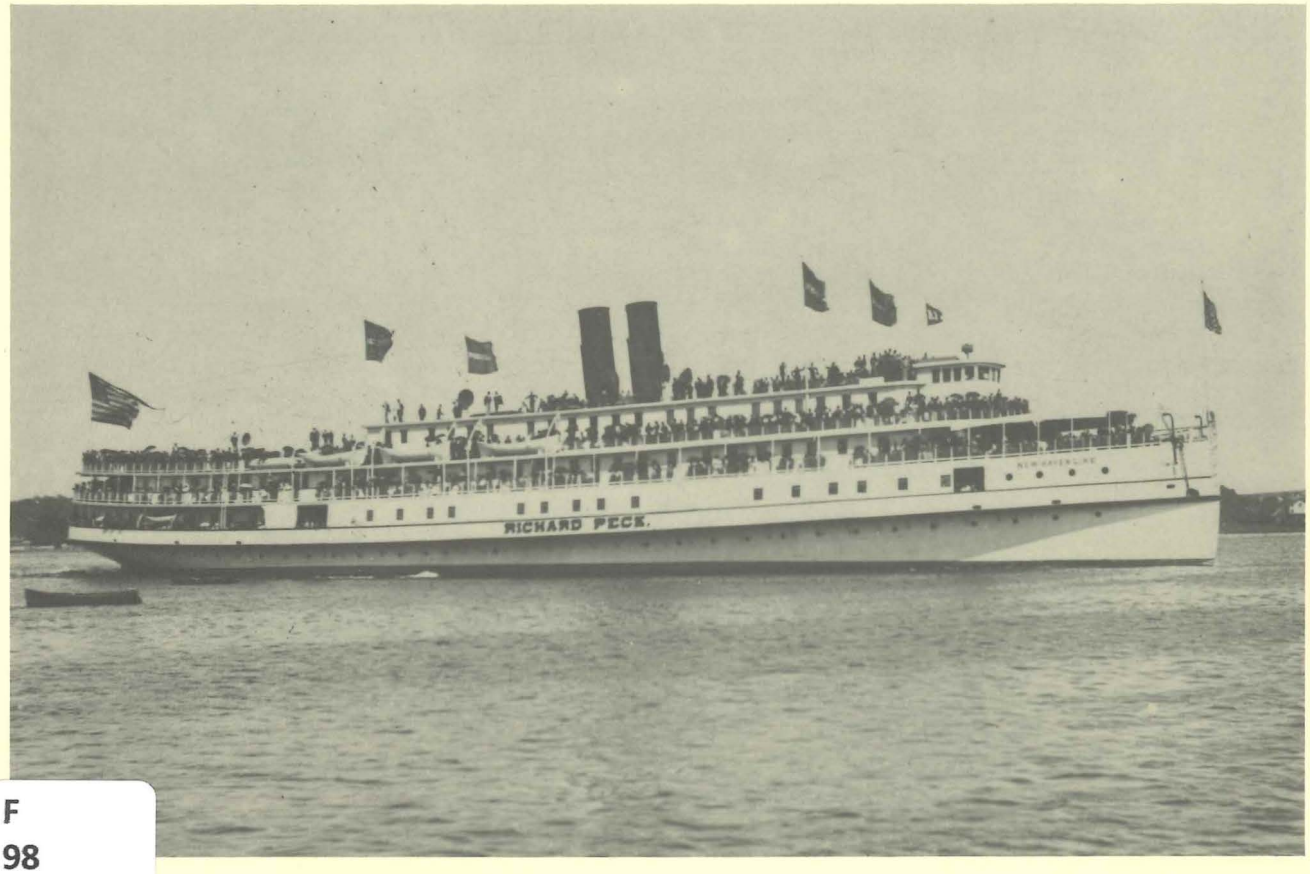
of The New Haven Colony Historical Society



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THE NEW HAVEN COLONY HISTORICAL SOCIETY was founded in 1862 by a representative group of New Haven citizens. As stated in the Constitution adopted by the Society, revised in 1965:

"The object of the Society shall be the collection, preservation and publication of historical and genealogical matter relating to the early settlement and subsequent history, especially of New Haven and its vicinity, and incidentally of other portions of the United States."

The museum and library of the Society are open to the public. There is a fee of $2 to non-members for use of the library; the museum is open free of charge. In addition to the Whitney Avenue building, the Society owns the Pardee-Morris House at 325 Lighthouse Road, Morris Cove, New Haven. Built originally about the middle of the eighteenth century, it was burned during the British invasion in 1779. Rebuilt at once, it incorporates surviving portions of the older structure. The Pardee-Morris House is now restored and furnished appropriately and is open to the public during the summer months.

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Cover: The steamship *Richard Peck* of the New Haven Line took passengers between New Haven and New York City until 1918. Photographed by George R. Bradley shortly after it was built in 1892. From the collections of the New Haven Colony Historical Society.

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The Brigantine *Ruby* docked at Long Wharf in 1891. The *Ruby* disappeared at sea not long after this photograph was taken. *From the collections of the New Haven Colony Historical Society.*

A Brief Introduction to the Maritime History of New Haven

by Amy L. Trout and Julie Ponessa Salathé

Maritime history is not just a story of ships and the sea, but also a history of people and their environment: of businesses, farms, factories; ships, rivers, oceans, and land; sailors, merchants, workers; and the struggle for the best possible life. The founding of New Haven on the coast was no accident, as maritime interests were a part of everyone's life. This paper will describe, in brief, the various eras and events in New Haven's maritime history and how they have influenced the development of the city into what it is today.

Seventeenth Century

The quality of life and the livelihood of the founders of New Haven were dependent upon a good harbor. A city situated on a natural harbor had a safe place to dock ships that brought food, essential domestic items, transportation, and communications. In addition, this commerce provided jobs for many people. In 1638, Reverend John Davenport, Theophilus Eaton, and other Puritan merchants chose the site for the city of New Haven based on its fine sheltered harbor and the confluence of three rivers and two creeks at its head: the Quinnipiac, Mill, and West rivers and East and West creeks. They planned to establish a major trading port, but their attempts to start coastal and international trade routes did not prosper. One disappointment, the loss of a fur-trading post established by New Haveners on the Delaware River, not only cost the colony money but also irritated the Dutch and Swedish settlers in the area. In addition, the loss of the "Great Shippe" (1647) was a major setback to the colony. The ship, bound for England on an international trading venture, carried approximately one-fifth of the colony's wealth and seventy prominent citizens.

The merchants hoped to develop a direct trade link with the mother country. After this failure, New Haven developed into an agricultural community with a modest coastal trade. The harbor was still important for communication, transportation, food, and other necessary domestic items, but it was unsuitable for large-scale trade because of its shallow waters and its distance from the open sea.

Coastal and West Indies Trade

Throughout most of New Haven's history, coastal and West Indies trade accounted for the bulk of maritime activity. Exportation of agricultural products became a mainstay for New Haven and area farmers. Items such as grain, livestock, salt pork and beef, dairy products (butter), and lumber from local areas and inland farms went out from the port of New Haven. Linen was also an important New Haven product. Small ships or sloops carried exports and imports to and from New York (New Amsterdam), Boston, Long Island, Newport, points along the Delaware River, the southern United States coast, and the West Indies. From New York and Boston came such essential domestic goods as clothing and tablewares imported from Europe. Cotton, tobacco, and other European goods were imported from southern cities. Sugar, molasses, rum, salt, spices, coffee, and goods from Europe were shipped from the West Indies. By the late seventeenth century, New Haven had recouped some of its earlier losses and was considered one of Connecticut's larger ports for coastal trade. Coastal trading remained important in the eighteenth and nineteenth centuries.

The growth of trade brought a measure of prosperity to New Haven. Development of the harbor and wharves allowed for larger ships and trade on a greater scale. The establishment of a customs house at New Haven in 1756 also signaled the growth of trading activity. In the colonial period, many inhabitants of the city were involved in maritime interests and trade directly or indirectly—from the farmers who produced exportable products to the coopers, shipbuilders, and sailmakers, nautical instrument makers, merchants, sailors, and others. Businesses that provided clothes, food, money (banks), lodging, and supplies for seamen also flourished. The city became home to people from many different lands. Seamen, merchants, and slaves who traveled in the vessels entering the harbor made New Haven a mélange of peoples and cultures. In the nineteenth century coastal vessels brought a different set of products: the raw materials and fuel (coal, lumber, and iron) necessary for the growing New Haven industries.

The Golden Era of International Trade

International trade finally became possible for New Haveners, but lasted only for a short period. Normal European trade routes were disrupted by the French

Revolution and Napoleonic Wars. Ships from New Haven and other small ports filled the opening in international markets and accepted the risks in order to gain high profits. Imports came directly from France, Spain, and England (wines, French silks, oil, and domestic goods) and not from the usual New York or Boston intermediaries. The embargoes of 1807–09 and the War of 1812 did, however, disrupt American trade. When the wars had ended, New Haveners found that they could no longer compete in a more normal trading climate with the larger ports of New York and Boston. New Haven's principal trading activity was again confined to the coastal United States and the West Indies.

The China trade also flourished briefly from the 1790s to about 1817. Empty ships left New Haven for the South Seas, where a cargo of sealskins was gathered. The sealskins were sold in China at huge profits, and tea, silk, spices, and porcelain comprised the return cargoes. The voyage of the *Neptune* (1796–99) was the most profitable New Haven venture from this period. The value of the return cargo was almost $300,000. By 1800, the Canton market was becoming saturated, and the seal trade was less lucrative. Also, by 1815, the seal population in the Pacific had been reduced to near extinction by overzealous hunting, and the last sealing voyage returned to New Haven profitless.

Long Wharf and the Development of the Waterfront

The development of the harbor paralleled growth in the town of New Haven and was also a catalyst for change. The building of wharves and dredging of deeper channels increased effectiveness and made possible new uses of the harbor. As early as 1644 the construction of a wharf was proposed, and every male between the ages of sixteen and sixty was asked to donate four days of work to this important undertaking. By 1736 the main wharf, Long Wharf, extended approximately four hundred feet into the harbor. The wharf was lengthened several times in the eighteenth century, and a large pier was built in deep water to allow ships to load and unload at all tide levels. Warehouses and shops lined the wharf by 1760. In 1810–11, William Lanson, a black man, oversaw construction of fifteen hundred feet of the wharf, and by 1820 the wharf had reached its greatest length: about thirty-five hundred feet. The extension of the wharf into deep water meant that a greater number of large ships could come into the harbor. The wharf and its stores, mills, warehouses, banks, and other shops became the center of maritime activity in New Haven. Other maritime-related businesses were clustered around the waterfront for maximum accessibility to the harbor.

In the mid-nineteenth century, New Haven changed from a primarily agricultural town to an industrial city. Food was now imported, as were coal for the railroads and steam engines, lumber for construction, and other raw materials for New Haven's paper and carriage industries. Construction of breakwaters

Unidentified oyster workers posing with their tools. *Photograph from the H. Gordon Sweet Collection, New Haven Colony Historical Society.*

and deeper channels and the filling in of land at the water's edge, 1880–1915, improved the harbor for shipping, industry, and recreation. After World War II, the harbor was deepened again to allow large ships carrying petroleum to enter. Today petroleum to fuel New Haven's and New England's industries accounts for 90 percent of imports.

The dredged material, approximately seven million cubic yards of mud, was used to fill in the harbor's head, and the west shore was extended nearly one mile east, creating land which now supports I-95, Long Wharf and Sargent drives, and the Wyatt Oil tanks. The shape of the harbor was changed dramatically to usher in the age of the automobile.

The Oyster Industry

The harbor and surrounding waters also provided a major source of industry for New Haven: oysters. Oystering became profitable in New Haven because of the perfect combination of conditions—sheltered, shallow, warm salt water with an influx of fresh water. Oysters have always been a major source of food for coastal residents, including the Quinnipiac Indians. By 1900, oysters were a staple of New Haveners' diets—they were eaten several times a week—and accounted for the largest percentage of seafood harvested in the United States.

The labor-intensive oyster industry created jobs and revenue for New Haven. In the seventeenth and eighteenth centuries oysters were mostly hand-picked or gathered with tongs from small boats. By the nineteenth century, the industry had become larger, with the communities of Fair Haven and Oyster Point as centers of the growing business. By 1856 the growth of the industry accounted for Levi Rowe & Company's use of twenty vessels, employment of one hundred shuckers, and sales of 150,000 gallons of shucked oysters per year. Other oyster businesses sold 1,000-1,500 gallons per day. With the natural oyster population dwindling because of high demand, "seed," or baby, oysters were imported from Chesapeake Bay and other ports and cultivated in traditional oyster beds and deeper waters.

At the same time, new technology was being developed for the oyster industry. The New Haven Sharpie, a small and efficient sailing craft which could hold more oysters and go faster than the traditional small boats and canoes, came into use in the mid-nineteenth century. Perhaps the biggest change came when steam dredges and steam-powered boats (c. 1874) were put into use. More oysters could be harvested in a shorter time and in deeper water than was possible with sailing craft and tongs. A large steam vessel with eight crew members could harvest as much in one day as a schooner with three men could gather in two and a half months. The year 1899 was unusually prosperous for oystering, but after that the oyster industry was beset by hard times. Low harvests, decreasing popularity of oysters, and increasing pollution damaged the business.

T.S. Bronson photographed these "Bathing Beauties" at Lighthouse Point, New Haven in 1915. *From the collections of the New Haven Colony Historical Society.*

In recent years, Connecticut waters have been too polluted to provide oysters directly for harvest, but seed oysters are grown in New Haven waters and then shipped to Long Island, where they grow to maturity in cleaner waters. The oyster industry continues today with the benefit of modern scientific technology, but it has diminished in scale and importance since the turn of the century.

Transportation

In the early years of New Haven's history, transportation and communication were accomplished mainly over water. Travel and communication with others was limited to boat or horse and carriage. Sailing packet ships carrying passengers and freight ran regularly between New Haven and New York, Boston, and other East Coast points until the 1860s. Transportation was revolutionized in the early nineteenth century by the emergence of the steamboat, canals, better roads (turnpikes), and railroads. Steamboats provided comfortable, often luxurious accommodations and faster travel. The first steamboat to arrive in New Haven, the *Fulton*, came from New York in 1815. By 1822, New Haven opened its own steamboat line, but these early years of steam travel were marked by fare wars and fierce competition between New York and New Haven. The last regular New Haven–New York steamboat, the *Richard Peck*, made its final run in 1920.

New Haveners, hoping to match the success of New York State's Erie Canal, built the New Haven-Farmington-Northampton Canal line. Completed in 1836, the canal linked the New Haven harbor to the agricultural interior of Connecticut. Unfortunately, the canal company suffered heavy financial losses due to competition from railroads and shutdowns because of eroded banks, and by 1846 the canal bed was converted to a railroad line. The New Haven and Hartford Railroad, opened in 1833, was the first to enter New Haven. By midcentury, four railroad lines converged at the waterfront with stops at several docking facilities. The railroads, in addition to transporting passengers, provided the crucial service of transporting imported and exported goods from the harbor to various inland points. Because of their efficiency, however, they also signaled the decline of shipping.

Recreation

By the late nineteenth and early twentieth centuries the waterfront and nearby beaches became favorite spots for recreation. Before the mid-nineteenth century few Americans had the money or leisure time for organized recreation. In the mid-nineteenth century wealthy Americans traveled to seaside resorts, and after the establishment of the electric trolley system (c. 1893), middle-class city residents could travel to the seashore quickly and cheaply. The Savin Rock House, a resort hotel in West Haven with twenty acres of land and recreational

facilities, opened in 1838. In 1870 the Savin Rock Amusement Center opened to the public and became a popular waterfront center of recreational activity until its demolition in 1957. Ferris wheels, rides, and amusements galore greeted the eager visitors. The "Thunderbolt" Rollercoaster, one of Savin Rock's most renowned rides (1925–57) extended five hundred feet out into the water on a pier. The cars swooped down toward the water for an exciting ride. By the turn of the century, Lighthouse Point, on the eastern side of the harbor, had become a favorite spot for swimming, boating, relaxation, and relief from the heat of the city. Fort Nathan Hale Park, a historic site, had been used as a park in the late nineteenth and early twentieth centuries and is again in use today as a park after its recent restoration. Recreational yachting, boat racing, and rowing for exercise began in the harbor in the late nineteenth century and continue today. The waterfront, once the domain of the mariner and merchant, has become a place for recreational and social activities for all New Haveners.

The New Haven harbor and maritime interests have affected life in the city of New Haven for hundreds of years. Trade, transportation, and communication by ship were an essential part of life. The sea provided a livelihood for many New Haveners, for sailors, merchants, farmers, oystermen, and others. Although much changed today, the waterfront is still home to shipping and recreational activities. The maritime interests of New Haven have shaped its communities and businesses and continue to influence life in the city.

CHRONOLOGY OF NEW HAVEN'S MARITIME HISTORY

1638	Several hundred English Puritans led by Rev. John Davenport and Theophilus Eaton settle at the mouth of a natural harbor and call their new home Quinnipiak, later New Haven.
1644	First proposal for a wharf in the harbor.
1646	New Haveners, hoping to establish direct trade with England, build a "Great Shippe," which is lost at sea.
1736	Long Wharf is built, extending approximately four hundred feet into the harbor.
1756	British government establishes a customs house at New Haven.
1750–60s	Prior to the Revolution, New Haven–West Indies trade becomes one of the colonies' most profitable markets.
1775	New Haven erects Black Rock Fort on the east shore of the harbor for protection against the British.
1776	War with Britain interrupts New Haven trade.
1779	British troops land in New Haven.
1780s	After the Revolution, trading resumes on a larger scale. New Haven begins trading directly with foreign markets.
1796	Tomlinson's Bridge is built across the mouth of the Quinnipiac River, connecting Fair Haven, the oystering section of town, to New Haven.

1790s	New Haven's China trade begins. During 1796–99, the *Neptune* becomes one of the most profitable maritime ventures of the era.
1804	U.S. government pays Amos Morris $100 for land just north of Five Mile Point. A lighthouse is erected (the lighthouse was rebuilt in 1846).
1807 & 1812	Embargoes and the outbreak of war (1812) halt New Haven's international trade.
1808	Black Rock Fort is rebuilt and renamed Fort Nathan Hale.
1810–11	William Lanson, a black man, oversees construction of a 1,500 foot section of Long Wharf.
1815	The steamboat *Fulton* makes the first New York–New Haven voyage.
1820	Long Wharf reaches its greatest length, 3,500 feet.
1822	New Haven begins its own steamboat line, the Connecticut Steamboat Co. (renamed the New Haven Steamboat Co. in 1824).
1836–46	Building and operation of the New Haven-Farmington-Northampton Canal line. Canal route links agricultural interior of Connecticut to the New Haven harbor.
1846	Canal route converted into railroad route. Eventually, tracks laid directly onto Canal Dock (just east of Long Wharf) for easy access to ship transportation.
1850s	The New Haven Sharpie, a small sailing craft used in the oyster business, becomes popular.
1859	Woman's Seamen's Friend Society established to provide spiritual and material assistance to seamen.
1860s	Oyster cultivation, or farming, begins in New Haven harbor and spurs the growth of the industry.
1870	Savin Rock Amusement Park opens.
1878	Use of deeper waters and steampower leads to tremendous growth of the oyster industry. Some of New Haven's businesses become the world's largest.
1880–1915	Breakwaters constructed for protection of passing vessels, and channels dredged in the harbor. Sections of the harbor near Long Wharf filled in to provide land for railroads and industries.
1900	Recreation becomes one of the most important uses of the harbor.
1920	Regular New Haven–New York steamboat service discontinued.
1922	Lighthouse Park and Fort Nathan Hale Park deeded to the city.
1938	The Great Hurricane of '38 disrupts maritime activity.
1940	The New Haven Terminal Company established as a warehouse for goods. It develops into one of the largest docking, storage, and transportation centers of petroleum, chemicals, and metals in the Northeast. Other terminals established in the following years.
1940s	Petroleum becomes the major product brought into New Haven harbor.
1950s	Redevelopment and highway construction alter the shoreline. Almost one mile of waterfront is filled in along the west shore.
1950s–60s	Oyster industry is at an all-time low.
1960s–70s	Public outcry against industrial and human waste polluting New Haven Harbor. Some laws against dumping passed.
1980s	Pollution cleanups continue. Attempts to revive the oyster industry. Waterfront development begins.

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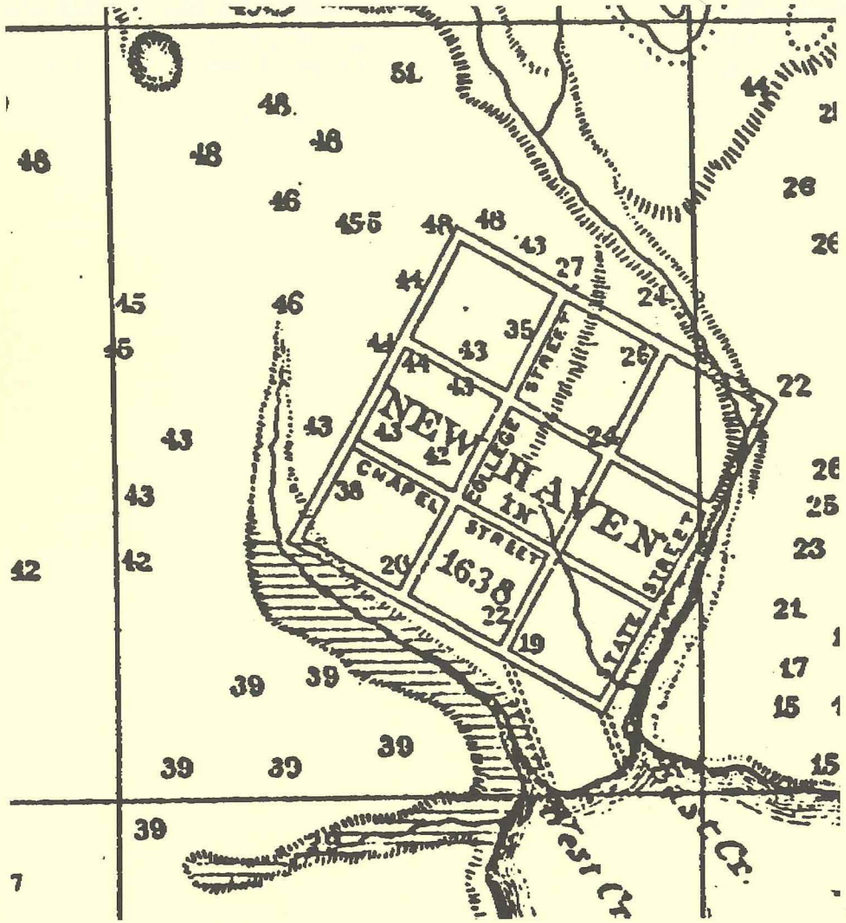
New Haven's Two Creeks

by Floyd M. Shumway and Richard Hegel

New Haven, like many urban areas, possesses lost and now-forgotten waterways. Two streams that were here in the beginning and are now out of sight and largely out of mind are West Creek and East Creek. The gradual disappearance of these two bodies of water can be seen simply as a geographical phenomenon, and that alone would make them of some interest. Actually, however, New Haven's growth from an isolated frontier agricultural village to a good-sized modern city was made possible to a considerable extent by a series of improvements in the way people and freight moved from one place to another. As new technologies developed, the creeks were put to new uses, and these new uses altered the shapes of the streams and finally obliterated them. The most important thing about West Creek and East Creek, therefore, is the part they played in the evolution of transportation, and that is the theme of this essay.

The most effective way of describing where the creeks flowed is to locate them on a modern map, referencing them to streets, buildings, and other landmarks that of course did not exist when the Puritans who settled New Haven first sailed into the harbor in 1638. West Creek originated approximately where Christ Church now stands, between Elm Street and Broadway just before they merge. From there it went toward the south, cutting across Park, Chapel, Crown, York, and George streets. Then it curved southeast and ran parallel to George Street as far as Church, passing under or very close to the Southern New England Telephone Company building on George Street and the building at the intersection of George and Church streets that once housed Malley's Department Store. It was also close to the route taken by the Oak Street Connector. Around Malley's it turned southward again and reached the shore of the harbor near the New Haven Police Headquarters at 1 Union Avenue. Inasmuch as that structure



Topographical map of New Haven in 1638 showing the nine squares and East and West Creeks. Excerpted from a larger map "New Haven Region Before 1640" from James D. Dana's book entitled *On the Four Rocks of the New Haven Region* published in New Haven by Tuttle, Morehouse and Taylor, 1891.

is a considerable distance from today's shoreline it should be explained that a great deal of fill has been added, the most recent of which created today's Long Wharf area and the land on which Interstate Highway I-95 is located.

East Creek began north of Grove Street Cemetery and west of Prospect Street, and from there it flowed southeast across Hillhouse Avenue and Temple, Grove, Orange, and Wall streets. Just after crossing State Street it curved to the south-southwest and ran alongside that thoroughfare all the way to what was then the harbor, about where the Water Street bridge crosses over the railroad tracks.

When Theophilus Eaton and John Davenport and their followers reached New Haven harbor in 1638, the two creeks were very visible, and they turned out to be wide enough and deep enough to accommodate their ships and other craft of that period. Vessels could be floated up the eastern waterway as far as Chapel Street and to a point a bit west of York Street. The settlers actually maneuvered the one on which they arrived up the western creek to a point near George Street before they disembarked. A stone tablet commemorating their landing was mounted in 1888 on the George Street side of a since-razed apartment house on the northeast corner of the George and College Street intersection. The tablet read

The Founders of this Town
Landing Near this Spot
Assembled Here
For the Worship of God
For the First Sunday
April 25, 1638

It is well known that an expedition led by Eaton selected the town site in 1637 and that seven men were left there to guard it until the entire party could come down from Boston the following spring. Those seven pioneers built themselves rudimentary shelter along West Creek near George Street. Consisting of simple huts covering excavations dug out of the bank of the stream, these structures must have been damp and cold, but they did face south toward the sun, were protected from north winds by the bank, and were conveniently near a spring. There is evidence that subsequent groups of settlers used these cellars as temporary housing while their homes were being built.

The town of New Haven was laid out early in the summer of 1638 very close to the West Creek and East Creek, and it consisted of a large square subdivided into nine smaller squares, plus three adjacent residential suburbs. There has been considerable debate about who actually designed the Nine Squares, what determined their size, and why they were placed exactly where they were.

It was long thought that a surveyor named John Brockett conceived the Nine Square design, but in 1980 this theory was effectively refuted by Elizabeth Mills

Brown, who demonstrated that although Brockett seems to have been the man who held the rod and chain, he was certainly not the planner. Brown suggested that the man really responsible for the design may have been either Robert Seeley, a New Haven settler who had helped lay out Worcester, or Lion Gardiner, an old friend of Davenport who had been Master of the Works of Fortification for the prince of Orange and who laid out Saybrook.

There have also been several theories advanced to explain the size and exact location of the Nine Squares. Anthony N. B. Garvan argued in 1951 that the orientation of the ground plan was based on principles laid down by Marcus Pollio Vitruvius, a Roman architect of the first century B.C. Later scholars John Archer and Norris C. Andrews have suggested a biblical origin. The latter explanation seems to be the popular one today, but it may someday be refuted. Whatever motivated the planner, whoever he may have been, we can be sure that he paid serious attention to the existence of the two creeks. After it was decided to locate the principal part of the town on the north side of West Creek rather than the south, the actual outer dimensions of the town plot may have been determined by the course of the creeks. George Street, if it had been extended slightly further west, would have crossed West Creek. As it was, West Creek made a sharp angle to the north of that point. Elizabeth Mills Brown sums up the situation aptly when she states that the town "was placed as close to the water as firm ground would allow and wedged into the angle of the two creeks, giving maximum exposure of streets to waterways."

West Creek was deeper than East Creek, so it promptly became the principal landing area for large vessels. They came up nearly to the intersection of George and York streets, but the biggest of them unloaded at College Street. There were landing places for smaller craft elsewhere along the water's edge and also some private wharves. In the eighteenth century a shipyard was built at the harbor on the eastern bank. From earliest times numerous tanneries and shoemaking operations were located along the other shore on the west side. Tanneries smell, and in addition there were marshes nearby. This combination of unfavorable conditions caused the land around the creek to develop into a bedroom community for the laboring classes. The creek was filled in in 1875, and the newly created land quickly became a slum.

During construction of the Malley building on George Street, remnants of old wooden wharves were unearthed. Richard C. Lee, who was then mayor, remembers that the outline of one pier became visible, and then, as work continued, a second and a third and finally a fourth pier were uncovered. Some very old bottles were dug up, and the mayor took one home, discovered that it was an unopened bottle of beer, and opened it. The superannuated beverage smelled so bad that he and his wife had to pour it down the drain. Clamshells were also found during the excavation, proving conclusively that the department store was going to be erected over what had once been the bed of West Creek.

Although West Creek was the unloading area for large ships, there were more landing places and wharves on East Creek in the early days because most of the important merchants built their places of business there. What is now State Street served as the principal commercial axis during the seventeenth and eighteenth centuries, and it was lined with wharves, shops, and merchants' residences. An early customs house and post office were located on State Street near the Elm Street intersection. The creek bed and the street parallel to it remained important in the economic life of New Haven well into the nineteenth century.

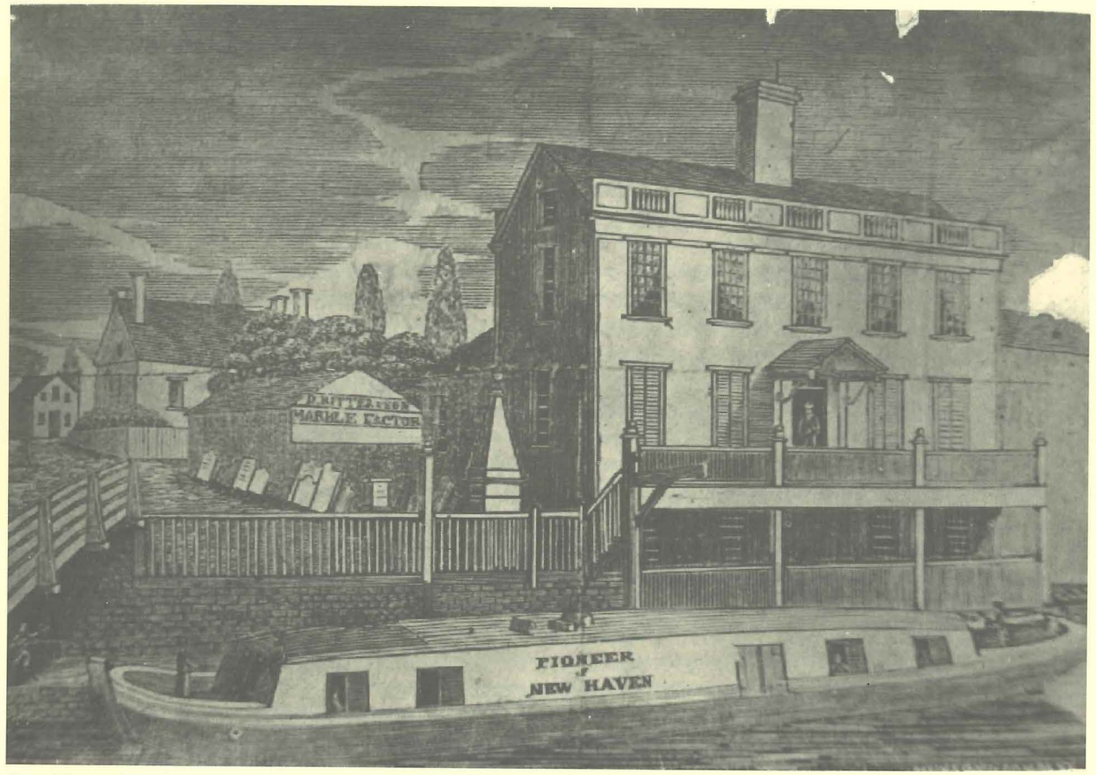
The two creeks entered the harbor fairly close to one another, and the point of land that separated them was also a busy area. At the end of the seventeenth century the first harborside wharf was built, and in time it grew into Long Wharf.

New England's pioneers lived in communities that were isolated from one another. Sailing ships could move goods from one seaport to another, but they did so very slowly. Overland transportation was even more unsatisfactory, consisting initially of horseback or wagon deliveries over roads that were nothing more than pedestrian paths or cartways through the wilderness. New Haven's first transportation improvement was a wagon line with a regular schedule that opened service to Hartford in 1717. By the time of the Revolution the primitive road system had been extended so that towns were linked to one another, and four horses pulling a one-ton wagonload of goods could generally cover twelve miles a day.

Toward the end of the century entrepreneurs built a good many turnpikes and bridges in the Northeast and collected tolls from people who used their facilities. They were offering a real improvement because four horses could pull a one-and-a-half-ton load over a turnpike a distance of eighteen miles in one day. The Hartford and New Haven Turnpike Co. was incorporated in 1798, and the New Haven and Milford Turnpike was constructed four years later.

There was another and very major innovation soon after that. Steamboating, introduced by Robert Fulton's *Clermont* in 1807, soon spread along the North Atlantic coast, the Gulf of Mexico, the Great Lakes, and the major rivers. By 1838 there were approximately eight hundred American steamboats engaged in domestic trade. New Haven was served during the middle and late nineteenth century by passenger ships running to New York, New London, Providence, and Boston.

During the early nineteenth century this country's ability to grow economically depended more on internal commerce than it did on overseas trade. The advent of the steamship was a boon to both forms of traffic, but steamboats could travel only where fairly deep water existed, and something even better than turnpikes was needed to transport produce overland. Canals were advocated as early as 1808 by Secretary of the Treasury Albert Gallatin, but none



Canal boats like the *Pioneer of New Haven*, seen here near the corner of State and Grand Streets, brought in goods from the interior of the state. Illustration c. 1835, from the Dana Collection, New Haven Colony Historical Society.

got built immediately. When the Erie Canal opened in 1826, it became known that four horses could pull a one-hundred-ton load along a canal at a speed of twenty-four miles a day. Soon canals became a national fad.

Initially Connecticut showed little interest in the canal idea because distances there were relatively short, a reasonably adequate system of carriage roads connected the major towns, and the wonderful new steamboats were developing east-west trade routes on Long Island Sound. However, as industrial towns began to spring up inland in Connecticut on streams with good water power, a new transportation need was recognized, and canals began to be seen as an attractive solution.

Only three canals were built in Connecticut, and the first of these was the seventy-eight-mile Farmington Canal, whose southern end largely utilized the bed of East Creek. Excavation began in 1825, the work being done mostly by recently arrived immigrants from Ireland. By 1828 the canal was open from New Haven to Farmington, and a year later it had been extended to the Massachusetts state line. The Hampshire and Hampden Canal was then built from the northern end of the Farmington Canal to the Connecticut River at Northampton, reaching its destination in 1835. By then the two canal companies had merged, and in 1836 they became a new corporation, the New Haven and Northampton Company.

The foot of the Farmington Canal was close to the intersection of Chapel and Union streets, which placed the canal depot conveniently near the City Market. The canal's waterfront terminus was a bit east of Long Wharf. It also connected with Tomlinson's Wharf, which was about where the Quinnipiac River enters the harbor. Two sluices at the terminal basin allowed traffic in and out of the canal, and at one time they serviced sixteen passenger and freight canal boats a week.

The canal brought New Haven more than just the benefit of increased access to inland markets. Prior to the construction of this new transportation facility the supply of water available for fighting fires in the central part of the city came from the modest flow in East Creek and from cisterns located near intersections. Now the canal delivered an almost unlimited amount of water for battling flames, and it also furnished water to manufacturing establishments.

Canals brought some immediate advantages, but there were also problems, and few of these waterways proved to be really profitable. The operators of the Farmington Canal rapidly discovered that bad weather slowed down or even stopped traffic and that a dry spell could also interrupt service by lowering the water level. Flooding due to melting snow badly damaged the canal's banks, and the wooden locks rotted rather quickly. Much of the time repair costs ate up profits or even generated deficits. During the period between 1836 and 1840 the Farmington Canal spent four times its revenue on restoration projects, and more bad years followed.

INCORPORATED UNDER THE LAWS OF THE STATES OF CONNECTICUT & MASSACHUSETTS
THIS CERTIFIES THAT
Charles H. Leonard
Henry W. Farnam
Trustees under the Will of Henry Farnam
are the owners of Two hundred 200 Shares of
THE CAPITAL STOCK OF THE
NEW HAVEN AND NORTHAMPTON COMPANY
$20000
NUMBER 339
200
SHARES
transferable only on the books of the Company in person or by Attorney on surrender of this Certificate. In Witness whereof the said Company has caused this Certificate to be signed by its President and Treasurer in the City of New Haven this 3d day of March 1888.
Edward A Ray
TREASURER.
SHARES $100 EACH
PRESIDENT.

The New Haven and Northampton Company operated the canal until 1846 when it was converted into a railroad route. Stock certificate from The New Haven and Northampton Company dated 1888 is used courtesy of Richard Hegel.

When the railroad era began in the United States, there was a feeling that only passenger traffic would be profitable, because freight carried over tracks would be unable to compete successfully with freight moved over water. For this reason most of the earliest railroads were built over short stretches where no canals existed. Many of them ran from an inland location to a port or between two ports.

Connecticut's two earliest charters were granted in 1832, one a line between Stonington and Providence, Rhode Island, another from Norwich to Worcester, Massachusetts. In 1833 a group of New Haven residents obtained approval to build a railroad from the Steamboat Wharf-Tomlinson's Bridge neighborhood in New Haven north to Hartford, and this therefore became the first line to operate entirely in Connecticut. Construction of the Hartford and New Haven Railroad Company's route was completed in 1839.

By the 1840s it had become clear that railroads could compete successfully with canals and were destined to replace them. Meanwhile the Farmington Canal continued to experience heavy losses, and in 1846 the stockholders voted to turn the canal into a railroad by draining it and laying tracks on its base. The New Haven and Northampton Company started the project at New Haven in 1847, opened as far as Plainville in 1848, and reached Collinsville in 1850.

Meanwhile the New York and New Haven Railroad Company had been constructed, connecting New Haven with the nation's leading seaport and marketing center in 1849.

At first it seemed possible that these rival railroads would be so antagonistic toward one another that they would not be willing to bring their tracks together in New Haven at some central transfer point. The New York and New Haven Railroad decided in 1848 to locate its depot at Chapel and Union streets. It then arranged three leases which gave it control of the New Haven and Northampton Company and allowed it to bring the latter line's tracks to a connection with its own in the center of the city. The Hartford and New Haven Railroad built additional tracks in New Haven to utilize the New York and New Haven Railroad's station. Their entry to the station was from the north, using in part the Farmington Canal route from Grand Avenue to Chapel Street.

What therefore became the central depot was designed by the prominent local architect Henry Austin and was built in 1848–49. It faced east on Union Street and filled the three-hundred-foot block from Chapel Street south to Cherry Street, on the site formerly occupied by the City Market. Austin used the Italian Villa style with added Moorish details and placed the building on top of the tracks and straddling them. Staircases, ramps, bridges, and subways carried passengers between the street and the track level.

This elegant and architecturally trend-setting structure rapidly became outmoded, and it was replaced in 1874 by a new station on Meadow Street. The

older building was then converted into a market, and it served that purpose until 1894, when it was destroyed by a spectacular fire.

As the years went by, short railroads everywhere tended to merge into larger and more efficient systems, and this happened in New Haven in the early 1870s. The New York and New Haven Railroad and the Hartford and New Haven Railroad combined to become the New York, New Haven and Hartford Railroad. That organization soon took over the Shore Line Road, which ran east from New Haven, and it turned the New Haven and Northampton Railroad into its Northampton Division.

Much has changed since then. Motor vehicles and airplanes have partially replaced railroads, and New Haven has continued to change its appearance and the appearance of the land on which it sits. Its two creeks no longer exist, but there are still transportation routes where they once flowed. Route 34, the Oak Street Connector, runs parallel to what was West Creek. The section of East Creek that ran alongside State Street became a canal and then a railroad bed, and it still functions as part of the main rail line to Hartford. Those two bodies of water may be gone, but they deserve to be remembered.

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Map of the City of New Haven in 1852 showing the railroads linked to harbor businesses and activities. Map by R. Whiteford and engraved and published by L.S. Punderson. *From the collections of the New Haven Colony Historical Society.*

New Haven's Seascape, 1815–1900, and the Relationship between Steam Packets and Trains

by Virginia M. Galpin

In this paper I discuss New Haven's harbor and the different vessels that used it, particularly oyster boats, sailing and steam trading vessels, and sailing and steam packets. In the introduction I provide as a background a brief look at New Haven's use of its waterfront over the years.

Introduction

In the nineteenth century New Haven changed from a rural town to an industrialized city, from a population of 8,000 in 1800 to 108,000 in 1900, from a population mostly Anglo-Saxon to a population that included Germans, Poles, Jews, Irish, and Italians. The landscape changed as did the waterfront. The Quinnipiac Reservation on the east coast, with its Indian village near the mouth of the Quinnipiac River, was in existence (according to a map) at least until 1845. Farmland stretched out to Five Mile Point, where the present-day lighthouse is. There was farmland behind the oystermen's houses in Fair Haven, farmland to the north of the city, and farmland west to Oyster Point (now called City Point) and West Haven.

Some influential men lived along Water Street. There was a stone pier between Long Wharf and Tomlinson Bridge. There were public baths and in 1816 a Steamboat Hotel. Henry Butler, who had had a coffeeshop on Church Street, had the foresight to see that steamboat travel, after the *Fulton* docked in 1815, was here to stay. About 1835 James Brewster bought this steamboat hotel, fixed it up for entertainment, and renamed it the Pavilion. People from as far away as the Deep South vacationed there. Long Wharf, the main dock, was not finished until 1810, when it was connected to an eighty-foot-square pier. By then it extended 3,500 feet out from the shore and and was used by sailing packets, trading vessels, and occasionally fishing and oyster boats. As noted, the *Fulton* docked there too in 1815, but by 1824 or 1825, steamboats docked at Steamboat Dock adjacent to Tomlinson Bridge.

The Farmington Canal, which emptied into a twenty-acre basin between Long Wharf and Brewery Street, was completed as far as Farmington in 1828 and as far as Northampton in 1835. It failed in 1846. Because New Haven had no convenient access to the hinterland—no big rivers like the Housatonic, Connecticut,

and Thames—the canal was built in an attempt to tap the produce and manufactured goods of the Connecticut Valley. It had three packets, the *Doe*, the *Hart*, and the *Fawn*, drawn by horses on the canal bank. By 1846, it was obvious that rail service was more efficient than canal service, and the canal was sold to the New Haven and Northampton Railroad, which laid its tracks on the canal bed. By 1848 the railroad was allowed to cross Basin Wharf, which cut off the basin from the harbor, and by 1852 the company began to fill the basin in. By 1856, the railroad extended its route to Northampton and finally to Springfield, which connected to other railroads going to Albany and Boston. In 1868 the railroad was allowed to build a dock, Canal Dock, that was 1,500 feet long and 80 feet wide. In the inshore part, it had a car barn, shops, and a round table. Similar facilities were built by the New York, New Haven and Hartford Railroad on the water's edge west of Long Wharf. In the space between, a passenger station, "built in 1849, converted to a market in 1874, and destroyed by fire in 1894,"[1] overlooked the water.

Belle Dock, located almost alongside of Steamboat Dock, was another railroad terminus. To this dock came the first railroad founded in New Haven in 1839, the New Haven and Hartford Railroad. Perhaps the New Haven and Derby Railroad, founded in 1871, used it too. The New York and New Haven Railroad, which had completed its tracks between the two cities in 1848, also used Belle Dock, and after 1872, when the railroad merged with the New Haven and Hartford to become the New York, New Haven and Hartford Railroad Company, it continued to use it.

Canal Dock was also used by the New Haven Transportation Company, which sent the *New Haven* and the *Northampton* to New York and back. Between this dock and Belle Dock were two others, Starin Dock and Heaton Dock. The first was owned by the Starin New Haven Company, founded in 1873, which sent freighters back and forth to New York. The second, built before midcentury, was owned by two cousins, Abraham and John Heaton; they began by outfitting ships with supplies and soon were in the sailing packet trade. Later their dock joined the Starin Dock and the Steamboat Dock in serving freighters and tug-pulled barges in the coastal trade.

From 1820 until nearly the end of the century a total of nine shipbuilding yards were located along the harbor's waterfront. In 1820, Birdseye Brooks opened one on East Water Street. Fifty years later it was still building sharpies for oystermen. In 1840, Joel Post and Samuel Griswold had a yard on Bridge Street, close to Tomlinson Bridge. When railroads came to the docks, this yard moved to the site of the old Yale Boat House, which was next to the Chapel Street Bridge over the Mill River. Post and Griswold were the first to move to Grapevine Point, the land between the Mill and Quinnipiac rivers. In 1851, Lane and Jacobs

opened a shipyard on Saltonstall Avenue on the west side of the point. On the east side was George W. Baldwin's shipyard, and across the Quinnipiac from him was Tuttle and Munsell's shipyard. By 1859 this was owned by W. N. Gesner. Between 1852 and 1855, three Fair Haven shipyards, probably these three, produced "4000 tons of shipping . . . mostly for use in the oyster trade."[2]

Warren O. Nettleton's yard on Ferry Street built the first three-masted schooners in the 1870s, and H. W. Hanscomb's yard at the junction of Ferry and River streets also built three-masted schooners in the 1880s. During the eighties too, George M. Graves, successor to Baldwin, built steam oyster dredges. In 1866, Samuel Hard Pook built two steamboats for the Propeller Line, a line which traded around Long Island Sound. His yard was probably just north of Nettleton's yard. And, finally, there was the Gesner and Mar yard in West Haven, just across from City Point. This was the same Gesner mentioned above; John E. Mar was his son-in-law. Their yard made the last of New Haven Harbor's three- and four-masted schooners, the very last in 1891 and 1893.[3] After 1893 New Haven could not compete with shipyards in Maine, where lumber was much cheaper. Also "coastal sailing vessels were succumbing to the onslaught of railroads, which carried more and more of the bulk cargo that had previously been shipped out of New Haven Harbor."[4]

By midcentury lumber and coal docks flanked Long Wharf. Sargent and Company hardware manufacturers, founded in 1864, occupied much of the waterfront between the old basin and Tomlinson Bridge, and the L. Candee Company Rubber Works, organized in 1843 between Wallace and East streets, could see the water of the Mill River, as could the Gas Works just beside it. The New Haven Clock Company, founded in 1855 and the inheritor of the Chauncey Jerome plant, founded in 1842, was on East Street close at hand. H. B. Bigelow and Company had a foundry on the southern end of Grapevine Point in Fair Haven.

At the start of the Civil War in 1861, New Haven's population had grown to 42,000 people, and the city had 232 factories.[5] By the end of the war, heavy industry began to gather around Long Wharf. A fish industry and a meat packaging and processing plant moved to Long Wharf, and in 1880, W. French, New England's largest coal dealer, moved there too.[6] Such a stench arose from these companies and so much pollution fouled the water that the old residents moved away, and immigrants moved in. New Haven had become an industrial town.

New Haven Harbor

New Haven Harbor is about four miles long and about one and a half miles wide. It is almost in the middle of the north coast of Long Island Sound. To reach

the Atlantic, a vessel has to pass through the Race on the eastern end or through Hell Gate to the East River on the western end—neither always a smooth passage. Until the breakwaters were built at the end of the nineteenth century, New Haven Harbor was wide open to the south. Morris Cove, on the east shore, was wide open to the southwest: southwest winds are New Haven's trade winds. Long Island is about eighteen miles away, far enough to allow the fetch of the wind to produce steep, short seas, sometimes eight feet in height, high enough to damage vessels at anchor or tied up to a wharf or pier. (Even today the breakwaters are no protection from hurricanes.) The harbor was, and is, shallow, with mud flats and sandbars that one can see from Route 95 at low tide.

In the early nineteenth century, the harbor had no docking facilities. The main channel off Oyster Point was only four hundred yards wide with a depth on both sides of only three to four feet.[7] As the channel approached Long Wharf, it narrowed to two hundred yards. Its depth at that point was only six feet at mean low tide, twelve feet at mean high tide. Sailboats provided the main traffic, and they were small—not more than seventy-five feet overall. The shallow depth explains why center boards, which could be hoisted up, were used instead of keels—even by the three- and four-masted schooners that were present after the Civil War. Width compensated for depth on the old steam packet side-wheelers. The shallowness of the harbor did restrict the size of vessels that could enter, and, of course, a small vessel could carry fewer goods at a much higher unit cost. One-masted sloops, two-masted schooners, and brigs (a two-masted vessel with square sails plus a fore-and-aft mainsail and jibs) were the workhorses of the day. There were no clipper ships.

During the first three decades of the nineteenth century, tonnage in New Haven, unlike that in other Connecticut ports, decreased. In 1810, average entry was 130 tons; in 1822, 118 tons; and in 1828, 128 tons. By comparison, in the same years vessels from Liverpool, England, had an average of 410 tons.[8] They had to go to New York or Boston, where the harbors were deeper. A chart of New Haven Harbor in 1846 states that six feet had given way to eight feet at mean low tide at Long Wharf, but five years before that, a "Statement of Enrolled Vessels owned in the District of New Haven, September 30, 1841,"[9] of which there were fifty, indicated that only five had tonnage over one hundred, six in the twenty-ton range, five in the thirties, eight in the forties, four in the fifties (these vessels might be sixty feet in length), seven in the sixties, nine in the seventies, three each in the eighties and the nineties. These vessels were small. Thomas R. Trowbridge said that in 1840, 185 ships drawing twenty-four to twenty-six feet were using New Haven facilities.[10] If so, those ships must have anchored outside the harbor and used small boats to load and unload. Certainly in the 1880–90 era, tonnage entering New Haven was one hundred times greater than it was a hundred years

before,[11] and that was a time when New Haven traded with all the world, from China to Europe. In spite of the harbor's inadequacies (including some underwater rocks, which were blasted out in 1852)[12] the use of the harbor did grow during the nineteenth century. It also grew because of the rising population and the city's industrial activities.

Finally in 1874, the channel was dug to 14 feet, but by 1879, five years later, the channel above Fort Hale was only 13 feet deep and only 110 feet wide. Silt was the culprit then, as it has been ever since. Merchants wanted more depth. The City of New Haven sent a plea, a "memorial," to the federal government's Committee of Commerce to dig the channel to a depth of 20 feet and also to build a breakwater from Lighthouse Point out to South West Ledge. Merchants also wanted to have the channel straightened and made 400 feet wide right up to Tomlinson Bridge, with more width over the sandbar off Fort Hale.

The installation of breakwaters meant that New Haven Harbor could be a harbor of refuge for vessels going up and down the Sound in bad weather and a place for vessels whose destination was New Haven to anchor. In the year ending June 30, 1879, over 38,000 vessels passed Bartlett Reef (not far west of New London), and almost 10,500 vessels entered New Haven. This latter figure apparently does not include some steamship lines and only part of the total number of sailing ships and barges. During the year ending December 31, 1878, foreign and coastwise vessels discharging their cargo in New Haven was estimated at over 5,000. These statistics come from the memorial. The federal government responded favorably inasmuch as it recommended $100,000 to begin to build the breakwater.

In 1897, nineteen years later, another memorial was sent. It again asked for a channel 20 feet deep—this depth in the lower part of the harbor with a width of not 400 but 1,500 feet "to a point above Long Wharf, thence to a depth of twenty-five feet and a width of six hundred feet up to Tomlinson Bridge." The big steam packets had to have room to turn around. The memorial also asked for more dredging in the Mill and Quinnipiac rivers to accommodate new industrial plants. Finally, by 1910, three breakwaters were built and the channel was straightened, deepened, and made wider.

Captain Charles Hervey Townshend was the main lobbyist for harbor improvement, and he was the designer of the three breakwaters. He expected New Haven to become a global port once the breakwaters were built, but instead they brought about the building of more industrial plants near the water and a demand for more coal, iron, and wood to fuel them and the steamships.

By 1895 there were more vessels entering New Haven than in 1879, sixteen years earlier. The statistics included in the second memorial show the number for the 1895 calendar year was 31,400 vessels as against 10,500 in 1879. This number

included 14,400 steamers of all kinds—packets, trading vessels, oyster boats, and tugs—as against 5,000. The 31,400 vessels also included 8,800 sailboats, probably about the same as in 1879, and 8,200 barges and scows in tow, of which there were none in 1879. (The categories in the two memorials are different.)

I found the first mention of tugs in an advertisement in the New Haven Directory of 1880. The New Haven Steamship Company used two tugs a day with the steam packets *C. H. Northam* and *Continental*. In 1882, the New England Transportation Co. advertised 250 coal barges of 400 tons each: there must have been tugs to tow them. For that same year I found the first mention of the New Haven Towing Company, a company for which the New Haven Colony Historical Society library has twentieth-century records. Their tugs docked at Belle Dock, one of the railroad terminals. In the 1885 directory, the Empire and New England Transportation Co. advertised 6 tugs and a fleet of 130 coal barges built with interior compartments. This company was mentioned for the year before too. Its barges went to all points on Long Island Sound. In 1890, five years later, the same company had 7 "steamers," but the same number of barges are listed as carrying 200 to 1,000 tons each. Whether this company and the New England Transportation Co. were New Haven–owned is not clear, but its barges and the barges from the Eastern Transportation Company of Philadelphia, which serviced Baltimore, Washington, Wilmington, and points south, did come to New Haven.

Evidence is lacking as to whether the three-masted and four-masted schooners used tugs in the nineteenth century. An undated photograph in the Dana Collection may be one piece of evidence. A photograph in the Society's collection of the twentieth century suggests that they did. A big schooner always had a yawl boat hung from its stern davits, which could be used to push or pull. Although yawl boats had power (gasoline after 1900), they had no reverse mechanism. Nonetheless, experienced captains did use them with success.

New Haven also had pilots (I found a pilot's license in one of our manuscript collections), who boarded ships outside New Haven Harbor and took over the skipper's job. Vessels, particularly those that were unfamiliar with the harbor's channel, depended on this service. Then there were ferries, which according to harbor maps were in service from the west bank of the Mill River up the Quinnipiac River. About 1900, there were ferries between Savin Rock and Lighthouse Point too.

New Haven Harbor had many inadequacies, but people lived with them, built docks, and made other improvements. Steam packets, sailing packets, oyster boats, trading vessels, tugs, barges, ferries, and, after 1870, yachts made up the traffic in the busy harbor.

Vessels in the Harbor

Oyster boats,[13] dugout canoes, skiffs, and small sloops could be sighted every day at the end of the eighteenth and the beginning of the nineteenth centuries. Men were gathering oysters inside the harbor by hand or by using a bull rake or tongs from small skiffs or sloops, and they were selling them locally or to Montreal, Albany, and places in between. Because the demand was great, the oystermen thought the oysters would become extinct, so probably as early as 1823 they imported oysters, first from New York, then from Delaware Bay, and finally from Chesapeake Bay. John Barber, an artist historian, said that there were 130 boats in the oyster trade by 1836.[14] By 1850, 120 schooners imported two million oysters to Fair Haven alone. At the same time Oyster (City) Point also became an oyster center, and many imported oysters were planted on the "beach," the sandbar just off it. At this time three Fair Haven shipyards produced "400 tons of shipping between 1852 and 1855, mostly for use in the oyster trade."[15] The one- or two-masted sharpie was invented in 1848 by a New Havener, Peter Goodsell, and after that it was copied with alterations from Maine to the Gulf Coast. Because a sharpie is fast, it became very popular. When yachting was born in New Haven in 1870, sharpies were the first boats used.

In 1862, a Frenchman, Captain Phillipe de Broca, gives us a picture of the harbor:

> The spectacle presented on entering the harbor is most curious. As far as the eye can see, the bay is covered with myriads of branches, waving in the wind or swayed by the force of currents. It looks as if a forest were submerged, the tops of trees only rising above the surface of the water. These branches serve, of course, as markers for the various owners' oyster beds.[16]

According to Doris Townshend, "Oyster lands within the harbor limits were owned by seventy-five or a hundred small growers in 1866."[17]

Oystermen in Norwalk and near the East River (the boundary between Madison and Guilford) were the first to put down dried shells just before the oysters spawned—with good results. But it was again Charles Hervey Townshend who, in 1867, because of his research on oysters, persuaded New Haven oystermen that they could cultivate oysters and did not have to import them from the Chesapeake any more. (Oystermen knew very little about the biology of an oyster or the methods used in its cultivation at that time.)

The big boom in the oyster business came when Henry C. Rowe bought hundreds of acres of underwater land outside the harbor in 1874 and, in 1878,

bought his first steamboat, the *William H. Lockwood*. He had taken his cue from Peter Decker in Norwalk, who had first used steam for dredging and to run his little sloop, the *Early Bird*, a couple of years before. Oyster steamboats multiplied after that. The biggest, built in 1912, reached only 114 feet in length. Oyster steamboats did tow their own barges loaded with dried shell. The harvest of oysters increased so much that shore facilities had to be expanded. By 1900, oysters were the main fishery product of the whole United States. In the State of Connecticut the four million bushels of oysters, probably more than three quarters coming from New Haven, were worth $84 million in today's currency. (The twentieth century is another story.) The harbor, inferior for trading vessels, was the ideal location for growing oysters. No history of New Haven in the nineteenth century could leave out the harbor's oyster industry.

Trading sailing vessels were occupants of the harbor too, but they came and went. Until steamships replaced them, they usually had a very short life. Occasionally mutiny, fire, or ice beset a passage. A sailing vessel covered with ice is almost impossible to control, so many trading vessels stayed in port when bad weather loomed. Sometimes vessels "were blown off shore and literally torn apart by the forces of wind and wave."[18] Sailing vessels without machine propulsion, or sometimes with it, can become helpless, and, of course, many vessels foundered or were stranded on sandbars or ledges—sometimes even on their maiden voyage—in calm weather or in a gale.

Piracy, which was rampant all through the eighteenth century from Nova Scotia down to the Caribbean, was still a danger in the first quarter of the nineteenth century. Even in 1800 "Edward Stevens, the U.S. Consul-General at Santo Domingo [probably on the south shore of the Dominican Republic] . . . estimated there were no less than thirty-seven barges [rowing barges waiting to attack becalmed ships] . . . and at least fifteen thousand pirates."[19] Piracy led to acts of Congress in 1822 that appropriated $500,000 to wipe the pirates out; the last six were hanged in 1835.[20] Because most merchants preferred "flight to fight," speed became important, and many trading vessels carried oars too. "Dead men tell no tales, nor does a sunken ship" was the motto of many of these pirates, but they helped themselves to the cargo and the specie and quite often to the ship itself—especially if she was fast.

In the last quarter of the century, floating derelicts were another hazard. Between 1887 and 1891, 957 derelicts were spotted between 52d meridian west longitude and the eastern coast of the United States. "On the average there were about 20 derelicts drifting aimlessly about in the North Atlantic."[21] These derelicts, particularly vessels loaded with lumber, which did not sink, drifted with the Labrador Current and the Gulf Stream. The Revenue Cutter Service[22] blew them up, beached them, or sometimes salvaged them. Occasionally there

were collisions too, usually in fog when a steam packet rammed a sailing vessel. Some packets were so intent on abiding by their schedule that they ignored safety precautions.

Because the life of many sailing vessels was short, no vessel was owned by one man. Vessels were owned in shares, each one valued at 1/64 the cost, and even parts of that 1/64 were sold. A captain usually had to own one share, was paid a monthly salary, and was given a small percentage of the gross weight. The more enterprising captains could make money by investing in many vessels. One of these was Magnus Manson.[23] He was born in the Shetland Islands, north of Scotland, in 1829, arrived in New Haven as a crew member of a coal ship in 1850, and went to work for H. W. Benedict and Sons, coal dealers. He became an American citizen in 1859, married his childhood sweetheart, and shortly thereafter became a master of ships. He acquired an interest in many vessels owned by his employers and finally, in 1906, became president of Benedict and Manson Marine Company. This company had twenty-seven schooners—some three- and four-masted schooners and one five-masted schooner. Magnus Manson had become a rich man—rich in the coal industry, and he used big ships trading mostly with Newcastle, England, and Newport News, Virginia.

The Trowbridge and the Townshend families were also rich merchants. They were in the West Indies trade. At times they must have had the same experience in the nineteenth century as that described by Gaddis Smith for the eighteenth century. In addition to natural and human disasters,

> the trade was also subject to frustrating delays and uncertainty. First the New Haven merchants had to collect a cargo by advertising in the weekly paper. The voyage south to Barbados, for example, could last from two weeks to well over a month. The vessel had to cross the Gulf Stream with its ferocious squalls and steep seas. . . . Assuming a safe arrival in the West Indies, the captain might find the local market glutted. He would then proceed from one island to another in search of an acceptable price. Sometimes a vessel would remain in one place for months waiting for buyers or gathering a homebound cargo. Repairs to the vessel or the need to replace crew members who had deserted, died, or been hospitalized, often led to further delay. The result was that few vessels could complete more than two round-trip voyages in a year.[24]

One exception was the *Trinidad*, a 180-ton bark (a three-masted ship with fore-mast and mainmast square rigged and mizzen mast fore-and-aft rigged) owned by Trowbridge, Sons, and Dwight, which made five trips to Trinidad in 1842.[25]

Trade with the West Indies was crippled as Britain, who allowed trade with its

ports just after the War of 1812, made a new treaty that forbade American vessels to enter its ports. In 1831, this treaty was revoked. Nonetheless, West Indies trade did decrease in the nineteenth century, particularly after the Civil War, and came to an end when Trowbridge, Sons, and Dwight went out of business in 1891.

For rum, molasses, sugar, and salt (for preserving food), New Haven vessels traded horses and cattle and produce. Exports included cheese, hoops, staves, board, shingles, fish, apples, bread, oats, rye meal, corn meal, injun corn (American sweet corn), candles, flour, brick, tobacco, vinegar, lard, tallow, fish oil, hats, skins, and furs. Additional imports from the West Indies and Cuba were coffee and fruit; after 1840, coconuts and oranges; after 1884, cigars and tobacco. Salt was imported only through 1891,[26] when iceboxes and refrigerators had been invented.

Though West Indies trade wilted, *coastal trade* blossomed. "Enormous quantities of carriages, springs, clocks, boots and shoes, locks, hardware and oysters,"[27] and perhaps other goods manufactured in New Haven were exported after midcentury. In April 1855, "fifty vessels of steam and sail were observed at New Haven in a single day."[28] On October 28, 1871, sixteen years later, a hundred and thirteen vessels were seen loading, unloading, and waiting their turn at the piers between Long Wharf and Steamboat Dock.[29] Coal from Newport News, Virginia, lumber from the Carolinas and Georgia, and cotton were the main imports. As trade with the West Indies decreased, small coastal vessels were replaced by bulk carriers, three- and four-masted schooners that could transport their freight more cheaply.

Sailing vessels also traded with the Canadian Maritime Provinces. After 1848 plaster, gypsum, shingles, board pickets, coal, and "grounds" (?) were imported from Nova Scotia. Pulp was shipped to New Haven after 1896. From New Brunswick after 1861 came coal (but not after 1885), lumber, plaster, and again grounds. One vessel in 1889 brought stone. These cargoes tell us what New Haven needed to build factories and houses for its growing population.

The first *steamships employed in trade* going south entered New Haven Harbor in 1885. There were seven in that year, ten in the year following, and again seven in 1887. The total number of steamships in 1888 and 1889 was only three, in 1893 six, in 1894 seven, and in 1899 only one. Other years had none. It was not until 1905 that steamships replaced most sailing vessels, and they came from foreign ports—Cuba, Panama, and Mexico. They brought "specimens," shells, fossils, and mahogany logs along with other goods. There were fifteen vessels in this trade after 1905.

Other steamships employed in trade came from Belgium, France, the British Isles, the Netherlands, Italy, Germany, Turkey, and Egypt. The first steamship entered in 1879, fifteen ships in 1884, forty-one ships in 1886, eighty-six in 1887,

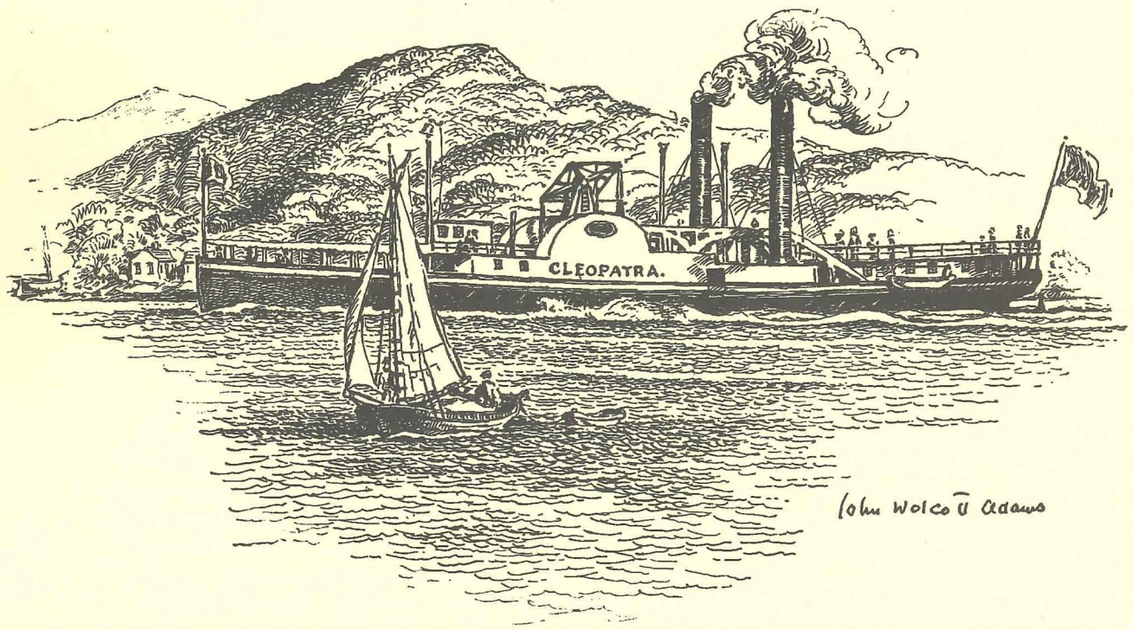
and many more after that. They brought rags for paper manufacturing from Alexandria along with donkeys, "wovens" from Turkey, metal manufactured goods from Germany, bulbs and seed from the Netherlands, plus leather, pottery, glass, some carriage parts, granite, paintings, wood, stereotype plates, apparel, and "miscellany."[30]

In spite of the bustling trade in the last quarter of the nineteenth century, in 1875 New Haven was thirteenth among other United States custom ports in collection of duties; and in 1878 it was behind Stonington, Bridgeport, and Norwalk in value of imports received.[31] Of course, the New Haven merchants wanted a deeper channel!

From 1869 to 1874 the imports averaged about $234,000, exports about $330,000. From 1875 to 1880 the imports averaged about $981,000; this increase was due to cargoes of iron and steel from abroad ordered by E. S. Wheeler and Co. Exports from 1874 to 1879 averaged $3,532,000, one year rising to $7,590,000 because of Winchester Repeating Arms Co.'s shipment of arms and ammunition to the Turkish government. Exports in 1880 were mostly "grain, flour, butter, cheese, and lard."[32] By 1890, New Haven's foreign trade stopped, probably because New York, with its deeper harbor and bigger ships, had taken it over.

One shipbuilder was C. S. Bushnell and Co., who launched the *Admiral Gregory*, designer Samuel H. Pook, on October 1, 1863, at the highest tide from his shipyard on the east shore of the Quinnipiac River in Fair Haven. The *Admiral* was 215 feet long, 35 feet in breadth, and 15 feet in depth when she was loaded. She was said to be well adapted for New Orleans and Havana trade, for use as an ocean steamer, or as a gunboat. Two similar ships, the *Commodore* and the *General Grant*, were supposed to follow in 1864. Another shipbuilder was H. W. Hanscomb (mentioned earlier), who between 1879 and 1889 built 10 three-masted schooners of 500 to 1,000 tons burden. Between 1880 and 1893, "Gesner and Mar shipyard in West Haven, opposite City Point, launched 13 magnificent three- and four-masted schooners for coal trade. Ironically, fully laden, they drew too much water to bring coal to New Haven where the channel had not yet been dredged to sufficient depth."[33] Atwater (?) wrote in 1887, "The shipping business of New Haven is now carried on with ports in Europe, South America, the Gulf of Mexico, as [well as] New Orleans and Galveston, and the West Indies. . . . The Cuban freighters are in sugar [and] molasses, brought us in return for coal and cooperage. . . . Lumber and cotton enter into the Gulf trade with ice, coal, and railroad iron." But of the 314 boats enrolled in the New Haven customs house in 1894, not one of their owners was a New Havener.[34]

Sailing packets—sloops and schooners—also came and went in New Haven Harbor at least until the 1860s. "As late as the Civil War, agents on Long Wharf advertised the departure of regular packet sloops and schooners to Charleston,



This John Wolcott Adams illustration is taken from Fred Erving Dayton's book entitled *Steamboat Days* published in New York by the Frederick A. Stokes Company, 1925.

Baltimore, Philadelphia, Albany, Boston, and lesser ports. A packet usually had better passenger accommodations than regular coastal vessels, but her principal feature was a day of departure that the traveler and the shipper could depend upon."[35] Some of these were built for the trade with "hatches fitted with removable ramps so that horses and carriages could be safely stored below."[36] They usually had a bigger spread of sail than other sloops and schooners and were faster.

Packets were not in the service of any trading firm, so their cargo, apart from the passengers' needs and their baggage, was contingent on the public's whim. These vessels might carry small packages, casks for liquids, barrels, crates, or boxes, or all five of these containers. One packet shipped an iron chair![37] The ledger for the New Haven Packet Co. of 1841 lists, among other things, marble, copper, mahogany, iron, hats, furs, brick, stone, oil mint, rugs, Nesti casks (?), tea, paper, hemp, stoves, lead pipes, granite, wool, coal, nails, chalk, cotton and spools. "Other things" include food, drink, forks, glass, tin plates, and soap, which might have been used for passengers. The ledger also includes crew wages, wharfage, and bridge tolls. Wharfage seemed to have been a regular expense for both sailing and steam packets.

Freight might be destined for the sailing packets' ports of call, its destination, or beyond. An advertisement in the New Haven Directory for 1841 under "Western Transportation" reads as follows:

> *Albany Packet Office:* The subscribers, Agents, and Proprietors of the Schooner Line of ALBANY PACKETS are prepared to forward GOODS and PASSENGERS to Albany, or any of the Towns on the Western Canals or Lakes at low rates.
>
> Persons shipping goods west can contract for their delivery at any of the Landings, and save the expense of re-shipping, commissions, etc. to which they are subject if shipped in any other way.
>
> *Boston Packet Office:* The subscribers are running a packet to Boston, and all Goods entrusted to them will be forwarded, as directed, with dispatch.

Maybe these packets were part of the New Haven Packet Company out of which grew the New Haven Steamboat Co. The advertisement tells us that New Haveners were continuing to move west to western New York and to Ohio, where Connecticut had property rights due to the federal government having given land instead of cash for goods during the Revolutionary War. Movement west had begun with Jefferson's Embargo and the War of 1812, when trade was in a decline, "and a particularly unusual summer of severe frost in 1816."[38] After that the movement gathered steam.

There were also yachts in New Haven Harbor at the end of the century, gaff-

rigged sailboats with a deep keel and long, overhanging main booms and bowsprits and probably steamboats. Evidence for yachts is in the second memorial to the federal government in 1897, which said that yachts anchored in the channel because of its greater depth. This must have caused dismay to other vessels, but it was another fact that the memorial used to persuade the government not only to dig the channel to twenty feet and build breakwaters but also to dig a deep basin for yachts.

The one category of vessels still to be discussed is *steam packets*, which also came in and out of New Haven Harbor for just over a hundred years, beginning in 1815. The *Fulton*, an "elegant" steamboat, "11 hours from New York, with 30 passengers,"[39] arrived in New Haven in March. She was sloop-rigged, 134 feet in length, 26 feet in beam, or 30 feet beam over her "rails," and 6.24 feet in draft.[40] Many steamboats in the early part of the century had about a five-foot draft, instead of a draft of over six feet, and it was not unusual for them to be rigged for sailing. (Many ocean steamboats were also equipped with sails, square sails, to cut down on their use of fuel.)

The early steam packets were made of wood with two stacks abeam. The cords of wood needed to feed the boilers took so much room that there was almost no room for cargo; but freight became important and finally brought in more money than passengers. Coal, a much more efficient fuel, replaced wood. In 1867 the ships' hulls began to be built of steel; the superstructures continued to be made of wood. In the beginning male passengers were confined to a saloon with two vertical berths along the side. If the saloon was too crowded, men slept on the tops of tables, on sofas, or on boxes. The women slept in a saloon aft or in a cabin on deck. No male passengers were admitted without permission. By 1829, staterooms were added, and in the first decade of the twentieth century they accommodated all sleeping passengers.

In the beginning food was cooked on a meter-square stove by boiling or on a mechanical rotating spit. Food and cabins cost extra. By the end of the century the stoves were made of steel and the kitchen was metal-lined; the food had become delicious. In 1846, gas replaced oil lamps; in the seventies, steam heat replaced stove heat, and in 1881, electricity replaced gas. [41] The improvements in the packets paralleled those on land, but, of course, steam packets had grown in size and propellers replaced side-wheels. Traveling on them was a plush experience, and businessmen and tourists enjoyed it. They were waited on hand and foot, had delicious meals, listened and danced to good bands after 1869 and slept in comfortable berths. It was also cheaper than traveling by train.

The *Fulton*, the first steam packet to come to New Haven (in March 1815), was owned by Chancellor Robert R. Livingston and Robert Fulton. Although Livingston's own experiments with steam-powered boats were not successful, he

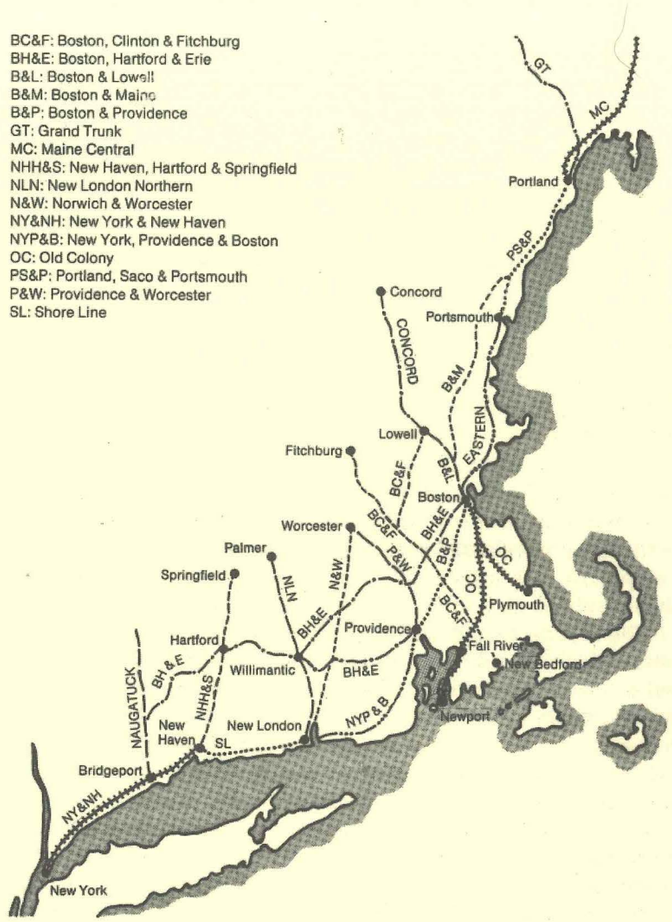
was interested in experiments done in England and France. When he became ambassador to France in 1802, Fulton joined him in Paris. In 1803, Fulton built a steamboat that ran on the Seine River at 3.58 miles an hour. The same year he ordered a steam engine from Watt and Boulton in England for shipment to the United States. The shipment was delayed until 1806, so it was not until 1807 that Fulton launched his first steamboat[42] on the Hudson River, to sail from New York to Albany and back again.

That same year, "the Legislature of the State of New York gave Chancellor Livingston, jointly with Fulton, the exclusive privilege of navigating all steamboats on State waters for twenty years, with right of seizure of other boats. Captain Elihu S. Bunker built the *Hope* and *Perseverance* for competition with Fulton's boat in 1811. The law enabled Fulton to confiscate and destroy them. He did."[43] New Haveners were furious, and yet it was not until 1822 that the Connecticut Legislature enacted a law prohibiting New York steamboats from coming into Connecticut waters. This war ended when Chief Justice John Marshall of the U.S. Supreme Court said in 1824 that "the monopoly rights granted by the New York Legislature were null and void, since only Congress had the power `to regulate interstate commerce.' "[44] The case of *Gibbons versus Ogden* buttressed the authority of the new federal government. Two months later the Connecticut law was repealed, the New Haven Steamboat Company was finally organized, and the steamboat *United States* was put into operation to run between New Haven and New York.

The *United States* was bigger than the *Fulton*. She was 140 feet long, 24 feet in beam, and drew 5 feet. Her speed was about 5 miles per hour.[45] She was the first of a number of vessels that increased in size, in carrying capacity, speed, and elegance. Between 1830 and 1840 speed reached 15 to 20 miles per hour.[46] The *United States* had an accident in 1832 that killed nine people (her boiler flue collapsed, setting off an explosion), but she was repaired and sold to the Hudson River trade. (Accidents were very rare on steamships owned by the New Haven Steamboat Company.) Many steamships followed, some of which became famous. The *Richard Peck*, built in 1892, and in service until 1918, is the one that people remember today. She "cruised easily at twenty miles per hour, her coal consumption was half that of the *C. H. Northam* [which was an understudy in the New Haven-New York route and a side-wheeler], and she could carry ten more car-loads of freight."[47] The *Richard Peck* was propeller-driven, the first among steamships of this company to be so propelled.

The Railroad Connection

The New Haven Steamboat Company and the Bridgeport Steamboat Company were finally sold to the New York, New Haven, and Hartford Railroad,



Principal New England Railroads Having Connections with Coastal Steamship Lines, about 1870 (Adapted from Baker, Formation of the New England Railroad Systems) Copyright ©1970 by Brown University. Reprinted from A PRODUCTIVE MONOPOLY: THE EFFECT OF RAILROAD CONTROL ON NEW ENGLAND COASTAL STEAMSHIP LINES, 1870–1916 by permission of University Press of New England

called the New Haven Railroad, in 1900. They were the last companies to be controlled by the New Haven Railroad's monopoly.

Very early both the steamship companies and the railroad companies knew they would have to work together, so when the Hartford and New Haven Railroad was founded in 1838, with James Brewster and other people producing its capital, the New Haven Steamboat Company won an agreement to make it the sole company to which the railroad company would send its cars. This angered Cornelius Vanderbilt of New York. He was operating steam packets between Hartford and New York, and he claimed that this new arrangement took business away from his Connecticut River Steamboat Company. The upshot was that the New Haven company was finally sold to him. But then Vanderbilt tried to raise the fares that had been agreed upon by the old New Haven Steamboat Company and the railroad. The latter's representatives refused to agree to the fare increase, so Vanderbilt eliminated the steamboats that had been running between New Haven and New York and substituted an inadequate ferry. At this, New Haven businessmen became angry too. They responded by sponsoring *The American Eagle*, Richard Peck captain, to take the New Haven-New York route. Vanderbilt began price cutting—and then he stopped. Apparently the war was over. New Haven businessmen organized a new steamboat company, the Citizen Line, with the steamer *Telegraph*, which was not financially successful, and the *Belle*, Richard Peck again captain, which was. The *Belle* became a very popular steamboat for both the New Haven-New York run and for local excursions. (One took passengers to Bridgeport for a concert at 10 A.M. and brought them back afterward! The *Belle* also made excursions to New London, Roton Point, Branford Point, Pawson Park, and Glen Islands, the "Finest Day Resort on Long Island."[48]

Vanderbilt was not to be outdone. His steamer *Cleopatra* rammed into the *Telegraph* in 1841, and his steamer *Kosciuska* collided "deliberately"[49] with the *Belle* a year later. The war finally ended when the *Belle* was sold to Vanderbilt's Connecticut River Steamboat Company.

The New Haven Steamboat Company revived in 1850 when Chester W. Chapin, a banker from Springfield, Massachusetts, and Colonel C. H. Northam bought Vanderbilt's interest in the company. Chapin and his son, Chester W., Jr., ran it until 1900. Chester, Jr., according to rumor, was at that time delighted to sell it to the New York, New Haven and Hartford Railroad.

Trains and steamboats had a symbiotic relationship. They could not get along without each other, and after midcentury the fare structure for both passengers and cargo, at least on New England ships, except for short port-to-port hauls where fares were memorized by agents and baggage masters, was similar to the fare structure on trains. New York was the hub of the water-rail transportation

system of all the eastern United States ports and particularly of the New England ports. The New Haven Railroad finally gained a monopoly over all southern New England from Boston to Albany south in both steamboats and trains. In the nineteenth century, New York became the most important manufacturing, marketing, and distribution center for all of New England—more important than Boston, which many steam packets and freighters from Portland, New Hampshire, and ports on the Maine coast passed by. New York had a deep harbor to which foreign vessels from Europe, Africa, South and Middle America, the West Indies, and Cuba could come. Coastal vessels from as far south as New Orleans and Galveston and as far north as Maine and the Canadian Maritimes were welcome too. Through the Hudson River, the Erie Canal, and the Great Lakes, New York had greater access to the west than Boston. New York also had a thriving garment industry which made clothes and sold hats, shoes, boots, gloves, muffs, corsets, stays, some of which were made in the manufacturing plants of New England. People and goods from all over the world used New York in transit or as their destination.

New York had benefits, but it also had troubles—troubles that were pertinent to the New England water-rail transportation system. Because Manhattan is a long narrow island, there was only one railroad, the Harlem Railroad, that ran tracks down the center. (Much later there was another railroad that ran tracks down the west coast of the island.) Ships could dock at the piers around the island, but in 1850 steam locomotives were banned south of 26th Street. In 1857, seven years later, locomotives could not go below 42nd Street. The tracks were there, but horses drew the freight cars 2.75 miles down to the piers. (Electric locomotives were not in service until the twentieth century.) Passengers could walk, use coaches or, later, streetcars. The early passenger station was built at the corner of 26th Street and 4th Avenue. Grand Central Station was not built until 1871. In fact, train travel on Manhattan Island was not convenient.

The garment industry wanted quick, dependable, guaranteed delivery. Little stock could be held in storage because warehouses were few and very expensive, rent was high, and fashions changed. Trains by themselves could not provide fast delivery. From Cape Cod south, an item ordered in the morning and loaded on a steam packet by 5 P.M. would be delivered at dawn the next morning. If an order came from north of the Cape, from Portland for instance, the steamboat would take longer. Water-rail service from Manchester, New Hampshire, to New York took thirty-six hours, by train alone four to eight days! Quick, dependable service was of top priority to the shippers, too, because they were in competition with the South and West, where some items could be made more cheaply.

Traveling through New York was not easy either for passengers or freight. New England steam packets did not go south from New York, and railroads did

not go through mid–New York, so railroads used tugs, barges, floats, and lighters to move their cars, passengers, and goods across the Hudson—a journey sometimes as much as fourteen miles—to railroads going south and west. Again, there were no bridges across the Hudson and only one bridge across the East River, which was to the north of Manhattan. New York was a bottleneck, and railroads by themselves were too slow for the garment industry and other factories which depended on manufactured goods.

After the Civil War more and more steamboat companies were founded in Connecticut ports, and more and more passengers and freight were carried. Competition increased, and soon the railroads knew that steamboats were a threat to their earnings. At this time railroad managers sought to buy out, lease, or get financial control of steamship companies. A rate war broke out in 1868–69. Fares were reduced so much that neither steamboat companies not railroad companies could make a profit. Men from both companies met to discuss the situation, and on April 14, 1869, they signed an agreement: some companies went out of business; fares for both passengers and freight were fixed; through passenger fares between Boston and New York were $5 a piece, of which $1.25 was paid into a common fund which went to the railroad. Freight rates were fixed to match those of the period before the rate war: 37 percent went to the railroad, 63 percent to steamboats. If steamboats refused to abide by this agreement, no freight would be delivered to them to carry. At last, there was peace.

But rate wars broke out again between 1877 and 1881. They were set off by a new Boston to New York route via the Providence Line, which was in competition with the Fall River Line, and an all-rail freight line between Boston and New York. Rates in passenger fares and on freight dropped. A contract was signed in January 1881; first class all-rail passenger fares between New York and Boston were set at a minimum of $5; first class rail-steamer fares were set at $4 from June 1 to October 1, at $3 for the remainder of the year. Freight rates were set at two-thirds the level of 1876. One company north of Cape Cod was given a 15 percent to 30 percent differential on goods because of its second-day delivery to New York, and two steamboat lines (Stonington and Fall River) divided income from through passenger service.

Traveling by steamboat was both cheaper and faster than by railroads, but when railroad companies controlled steamboat companies, the latter kept their own identity because railroads were not willing to insure vessels from fire, collisions, and other disasters that might happen to ships at sea.

The second rate war was the last. Between 1881 and 1899 independent companies merged into larger corporations. The new six-hour rail journey between Boston and New York interfered with but did not wreck steamboat

service, and the Interstate Commerce Act of 1887 gave the commission authority over rail-water rates—but not over port-to-port rates—and the New Haven Railroad had won its monopoly.

The war between Vanderbilt and the men in New Haven in the first part of the century was the first of the steamboat companies' rivalries with each other and with a railroad. This rivalry continued through the century as steamship companies in ports from Connecticut to Maine fought for dominance on the water routes to New York. Meanwhile the railroads in New England were founded, merged, went bankrupt, or were eliminated, and fought too for dominance among themselves. The railroads also wanted direct access to New York, but in the beginning there were no bridges across big rivers—in Connecticut the Connecticut River and the Thames River. Railroads ran north and south, mostly in river valleys; the nearest east and west railroad was in Massachusetts, so the only connection the railroads had with New York was by water. Of course, when bridges were built across the Connecticut River in 1870 and across the Thames River in 1889, and east-west travel became possible without the trains having to cross these rivers in ferry boats, the railroads prevailed. In southern New England, the New Haven Railroad was able to build a monopoly.

This monopoly made the water-rail transportation system more efficient: one big maintenance area in Newport, Rhode Island, eliminated others up and down the northeast coast; a central commissary department on New York's Pier 14 did the same; steamships and railroad cars could be moved around to where they were most needed; supplies could be bought in bulk; in the case of accidents replacements could be found quickly; fares for both freight and passengers and personnel wages could be set for the whole system; schedules for trains and boats could be advertised more easily. Large boats with their lower unit cost pleased shippers too, although this meant taking away trade from the small harbors with less depth than the bigger ones.

Mergers and consolidation in business were common in the nineteenth century, particularly in the railroad business. The Sherman Anti-Trust Act of 1890 was not being enforced. "Approximately one hundred small independent railroads were built in Southern New England between 1850 and 1860," and they "served primarily to link existing towns, businesses and markets." Using the Pennsylvania Railroad as a model, the New Haven Road consolidated these railroads. "By 1890, revenue exceeded $100,000,000 per year, and New Haven employed 4,000 people to serve twelve million people annually."[50] Pierpont Morgan, a New York banker, became interested, and he decided, with a group of other investors, to control *all* transportation—steamboats, street lines (one could go from New York to Boston or from New Haven to Springfield by trolley at the

turn of the century), and other railroads. He put Charles Mellen in as president, and Mellen with Morgan's help was able to make Morgan's dream come true. But complaints about shady financial activities were received by a government commission who, between 1906 and 1912, began to investigate. Many of the complaints were valid, but nevertheless many railroad and steamship customers wanted the monopoly to continue. The Sargent Hardware Company and the Geometric Tool Company were two of the twelve companies from New Haven who voted in favor of the monopoly.[51] The monopoly did come to an end: J. P. Morgan died in 1913, and Mellen was eclipsed. The Panama Canal Act of 1912 forbade railroads to own coastal lines unless they were worthy, but the real death knell for steamship lines came when they no longer had enough business to keep running, thanks to trucks and automobiles, through trains to New York, and higher union wages.

NOTES

1. Floyd Shumway and Richard Hegel, eds., *New Haven, An Illustrated History*, 134.
2. R. Osterweis, *Three Centuries of New Haven*, 243.
3. *Shallops, Sloops, and Sharpies*, 54 and 55.
4. Ibid., 55.
5. D. Ottenstein, "New Haven Harbor."
6. P. Sharp, "A History of New Haven Harbor."
7. C. Adams, "Why Did the New Haven Port Fail?"
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11. *Shallops, Sloops, and Sharpies*, 25.
12. *New Haven, An Illustrated History*, 68.
13. Material on oyster boats comes from Galpin's pamphlet.
14. Osterweis, *Three Centuries of New Haven*, 243.
15. Ibid.
16. Doris B. Townshend, *Townshend Heritage*, 180.
17. Ibid., 181–82.
18. P. Morris, *American Sailing Coasters*, 101.
19. Ibid., 7.
20. Ibid., 8.
21. Ibid., 102.
22. According to Morris (ibid., 109) the United States Life Saving Service was begun in New Jersey in 1848 and later spread to all the most dangerous parts of the United States' eastern coast. In 1915, this service merged with the Revenue Cutter Service to create the United States Coast Guard.
23. Ibid., 80.
24. *New Haven, An Illustrated History*, 65.
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26. D. Daggett, New Haven Book of Custom Record.

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